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URETERO-URETERAL ANASTOMOSIS. URETERO-URETEROSTOMY.

By H. A. Kelly, M. D., *Gynecologist-in-Chief, The Johns Hopkins Hospital.*

Remarks by Dr. Bloodgood.

My attention was first called about eight years ago to the dangers of cutting the ureter, in the case of a little girl, about three years old, upon whom I operated for a retro-peritoneal tumor which had lifted the ureter of one side entirely out of its normal course, displacing it upward into the lower abdomen. The most marked displacement of the ureter that I have observed since that time occurred in the case whose history forms the basis of this communication. The patient, a mulatto, twenty-five years of age, was sent to me by Dr. Cheston, of West River, Maryland. On examination I found the whole lower abdomen filled with a mass about the size of a large fœtus at term, from which large nodules projected. This tumor filled the true and false pelvis and extended up above the umbilicus. The small cervix, the vault of the vagina and the bladder were drawn up into the abdomen and displaced to the left. Her temperature on admission was 37.7° C. (99.8° F.), ranging from 37.8° to 39.9° C. (100° to 102° F.) up to the time of operation. Her pulse was full and strong, varying from 74 to 120.

Urinary examination: color amber, flocculent precipitate, acid, sp. gr. 1018, albumen, but no casts.

Diagnosis: Myoma uteri.

Hysteromyomectomy was performed May 1, 1892. The large myomatous uterus was exposed immediately beneath the parietal peritoneum, and was lifted out of the abdomen through an incision 24 cm. long. Both tubes and cornua uteri were drawn high up into the abdomen by the tumor, the round ligaments lying like guy-ropes close to the sides of the enlarged uterus. The uterus presented three myomatous masses, one about 12 cm. in diameter at either cornu uteri, and the third, 18 cm. in diameter, partly within the pelvis, below the right cornu.

I first ligated the round ligaments and both ovarian arteries and veins near the brim of the pelvis, and then opened the broad ligament and pushed its parietal layers to the front and back of the pelvis, thus exposing the uterine vessels on the floor of the pelvis. At this juncture a large flat vessel 1 cm. in diameter was exposed for about 7 cm. of its length on the anterior surface of the lower pelvic mass.

It closely resembled an engorged vein, and as it apparently terminated in the congeries of vessels at the cornu uteri, although its resemblance to a ureter was spoken of, it was doubly ligated and cut. The error was apparent at once, as its patulous lumen and thick walls showed it to be the ureter. This inference was confirmed by passing a sound downward into the bladder and upward towards the kidney.

As a result of pressure from the myoma the ureter was enlarged to four times its normal circumference, forming a well-marked hydro-ureter. On removing the upper ligature, about 20 cc. of clear urine escaped. While deciding how to

deal with this complication I completed the hysteromyomectomy in the usual way. I then turned my attention to the cut ureter. There were obviously three modes of treatment: the establishment of a urinary fistula by bringing the upper end out at an opening in the flank or in the middle of the abdomen; removal of the right kidney; or the bolder plan of anastomosing the severed ureter.

Although not aware that a successful union of a divided ureter had ever been accomplished in the human subject, I felt that I could undertake with considerable confidence a plan devised and practised successfully upon the dog by Dr. W. Van Hook of Chicago.

His method consists in tying the lower end of the divided ureter and then making a slit in the ureter below the ligature, into which he invaginates the upper end by means of traction sutures. Proceeding according to this method, I ligated the lower end of the ureter close to its cut extremity and made a longitudinal incision about 1 cm. in length in its anterior wall. I then passed a fine silk suture through the lateral wall of the lower portion, a half centimeter below and posterior to the angle of the slit, and brought it out through the slit and caught it in the outer coats of the upper end of the ureter close to its margin; this suture was then carried back into the slit and through the wall of the ureter close to the initial point of entrance. A similar suture was then passed at a point directly opposite. By making traction on these sutures while holding the slit open, the upper end of the ureter was readily invaginated into the lower. These sutures were then snugly tied. In order to avoid the danger of urine backing up through the incision, the edges were sutured to the intussuscepted portion with ten fine silk rectangular sutures, catching only the outer coat. The loose peritoneum in the anterior part of the pelvis was now drawn over the field of operation and attached to the posterior surface of the stump and the broad ligament by a continuous suture, except at the point where the ureter was united. Here two pieces of gauze were laid over the anastomosed ends and brought out at the lower angle of the abdominal wound, to insure drainage of the urine in case the operation was unsuccessful. The rest of the incision was closed in the usual manner. At no time after the operation was there the slightest urinary odor detected on the dressings, and on the third day the gauze drainage was removed. The patient had no nausea or headache or other untoward symptoms, and the convalescence throughout was uninterrupted. Abdominal sutures were removed on the eighth day; union *per primam* throughout incision.

She was catheterized every four hours the first day, and on the second passed urine voluntarily, after which the catheter was no longer used. Albumen was present in considerable quantities before operation, but at no time following operation was there more than a trace, and the urinary record indicates only a faint trace at the time of her discharge.

The amount of urine excreted was less than 500 cc. for nine days after operation, not allowing for an uncertain quantity lost at stool. On the 27th day after operation she was excreting 1080 cc., and on the 42d day 1120 cc.

The patient was permitted to get out of bed on the seventeenth day, and was discharged in excellent health six weeks after the operation.

Remarks by Dr. Bloodgood.

Anastomosis of the right ureter after section in a dog. Removal of kidney and ureter two and one-half months after the operation, finding kidney normal, ureter not dilated, caliber and mucous membrane restored without stricture.

Having heard of Dr. Kelly's successful case of anastomosis of the ureter in a woman, I decided to make the attempt on a dog. July, 1893, a large dog was anaesthetized with morphine and ether. A large incision was made in the abdomen to the right of the median line, the bowels pushed to the left, exposing the right ureter behind the peritoneum just before it crosses the iliac vessels. The peritoneum was torn, the ureter lifted from its bed, cut in two, the lower portion ligated, and a longitudinal incision of 1.5 cm. made through its ventral wall, beginning 5 cm. from the ligature. A fine straight needle, threaded with fine black silk, was passed through one lateral wall of the upper portion 5 cm. from its end. The needle then passed through the longitudinal opening in the lower portion and out its lateral wall about 5 cm. from the bladder end of the opening. A second suture was passed in the same manner on the other side. Drawing on these two sutures and invaginating the upper portion of the slit in the lower, the anastomosis was made. These sutures were tied, and two additional ones placed on each side through the overlapping portions of the ureter.

The dog made a perfect recovery.

Examination of the specimen shows overlapping at the point of anastomosis. The lower portion ends in a blind sac corresponding to its ligated end. The upper portion enters the lower at a slight angle, about 1 cm. below the blind end. The caliber is the same. The mucous membrane seems entirely restored and continuous. The upper ureter is not dilated; the kidney seems unchanged.

Note.—Later microscopic examination of the kidney shows no change.

READY JANUARY 1, 1894.

Hospital Care of the Sick; Training Schools for Nurses; Dispensaries; First Aid to the Injured; Transactions of Section III, International Congress of Charities, Correction and Philanthropy, held in Chicago, June 12 to 18, 1893. Edited by J. S. Billings, M. D., U. S. A., Chairman, and Henry M. Hurd, M. D., Secretary.

This volume contains papers by Prof. Esmarch, Lord Cathcart, Cardinal Gibbons, Mr. Henry C. Burdett, Col. J. L. Notter, British Army, Dr. Grossheim, German Army, Dr. Merke, Mr. John Furley, Drs. Billings and Smart, U. S. Army, Drs. Gatewood and Beyer, U. S. Navy, Dr. Stoner, U. S. Marine Hospital Service, Miss Florence Nightingale, Miss Twining, Miss Hughes, Miss Gordon, Miss Hampton, Miss Darche, Miss Davis, and many others. In one volume of over 500 pages with 60 illustrations. The edition is limited and the book is not stereotyped. Price, bound in cloth, delivered, $5 per copy. Address The Johns Hopkins Press, Baltimore.

THREE CASES OF REMOVAL OF GASSERIAN GANGLION.

By J. T. M. Finney, M. D., *Associate in Surgery, The Johns Hopkins Hospital.*

Remarks by H. M. Thomas, M. D., *Assistant in Neurology.*

(*Reported to the Johns Hopkins Hospital Medical Society, October 9th*, 1893.)

I have brought here to-night two cases, from each of whom I removed the Gasserian ganglion on the right side, about a month ago, for very severe neuralgia of the fifth nerve. I wish also to report a third case operated upon in a similar manner for the same trouble, but which unfortunately terminated fatally about 7 hours after the operation, apparently from disease of the coronary arteries. The fatal termination, however, was undoubtedly precipitated by the shock of the operation. The operations were performed according to the method first described by Hartley[1] of New York, and very shortly after, and entirely independently of his work, by Krause[2] of Altona. Their operations are identical, and consist in turning back an omega-shaped flap of skin, muscle and bone, with a diameter of about 2½ inches, and having its base at the zygoma and its apex at the supra-temporal ridge. This affords an opening through the skull, large enough to allow of a good view of the floor of the middle fossa, and also permits a ready manipulation of its contents. The dura is stripped away from the bone, and, together with the temporo-sphenoidal lobe, lifted up out of the way, with broad, flat retractors. This brings into view the foramina spinosum, rotundum and ovale, with the middle meningeal artery, and the 2d and 3d divisions of the nerve, and lastly the ganglion itself.

This operation seemed to me to possess distinct advantages over Rose's[3] or Horsley's[4] methods, and was therefore employed in all three cases.

The removal, or attempted removal, of the Gasserian ganglion is of sufficient rarity and interest, I think, to warrant reporting the cases somewhat in detail.

Case I.—Mrs. K., aged 47, the mother of seven children, applied to the Nervous Department of the Johns Hopkins Hospital Dispensary, on July 6, 1891, complaining of severe pains in the right side of the head. She gave, in brief, the following history. As a child was very well. Has enjoyed excellent health, except that since marriage has had dysmenorrhœa and "occasional fainting spells." Present trouble began three years ago, as a severe shooting pain in the right side of lower jaw. At first thought it came from a tooth. It was aggravated by chewing. Had all her teeth extracted, with no relief whatever from pain, but on the contrary it seemed to be worse from that time. The whole side of the head seemed painful at times, but it was always worse in the lower jaw along the gums. Sleeps well at night. Examination showed no tender points, no atrophy, no sensory changes. She seemed very nervous, and it was thought probable by Dr. Thomas that there was an element of hysteria in the case. She returned to the dispensary at intervals, complaining more or less all the time, until April 18, 1893, when she was admitted to the hospital for operation. Three days later Dr. Halsted resected a portion of the inferior dental nerve, which was followed by only slight temporary relief. She went home for a while, but returned three months later, complaining of more severe pain than before, located this time more especially in the gums and in the infra-orbital region. On August 17, 1893, I resected the infra-orbital nerve in the floor of the orbit. This gave no relief whatever, so on September 7, 1893, I operated to remove the Gasserian ganglion. The incision was made as directed by Hartley, and the flap of skin, muscle and bone turned down over the zygoma. Here we encountered our first difficulty. The middle meningeal artery ran through a foramen in the bone instead of in a groove as is usual. It was ruptured in breaking off the base of the bone flap, and had to be chiseled out of its foramen before it could be secured. The hæmorrhage was troublesome but not very severe. The dura was rather adherent, and there was a good deal of troublesome oozing in stripping it back, which was controlled, however, quite readily by sponge pressure.

The middle meningeal artery was tied with great difficulty at the foramen spinosum, and then cut. By retracting the brain quite firmly, the 2d and 3d branches of the nerve were brought into view, just where they entered their respective foramina. Following backward with these nerves as a guide, the reflection of dura covering the ganglion was next exposed. The attempt was made to tear or cut through this layer, but it resisted all our efforts.

The second and third branches were then divided as close to the bone as possible. The attempt was made to lift out the ganglion, but it was firmly bound down by the dura, and we only succeeded in tearing off that portion of the two branches between their exit from the cranium and the ganglion. The ganglion was removed piecemeal, as much as possible, and destroyed by picking it to pieces with forceps. In attempting to free the dura covering the ganglion, I think I tore into the cavernous sinus; but the flow of blood, momentarily quite alarming, was easily stopped by packing with gauze.

The bone-flap was then replaced and a small piece of iodoform gauze left in for drainage, as there was considerable oozing. The gauze was brought out through a notch made in the bone-flap for that purpose. It was held firmly in place by buried silk sutures through the fascia. The continuous subcutaneous silk suture was used for the skin. The packing was removed about the fifth day, and the healing has been perfect throughout, without a bad symptom. She has continued to complain of a stiffness and sore feeling in the right side of her head, but it is different in character from the pain preceding the operation. She sleeps and eats well now, and has gained

[1] New York Med. Journal, Vol. LV, No. 12, March 19, 1892.

[2] Archiv für klinische Chirurgie, Band XLIV, Heft 4, Oct. 11, 1892.

[3] Lancet, Nov. 1, 1890.

[4] British Med. Journal, Nov. 25–Dec. 12, 1891.

considerably in weight. It is a question in our minds as to the nature of the trouble complained of, but it is probable that it is magnified. Dr. Thomas has kindly gone over both cases very carefully, and will describe the nervous phenomena observed. You see the wound has healed perfectly and the scar is very slight.

Case II.—J. H., aged 63, farmer. Family history good. Excepting the diseases of childhood, has always been well. Present trouble began about 11 years ago with a sudden attack of very sharp pain over and in the eye; this attack lasted for several days. Has had similar attacks at intervals ever since; for the past 3 years have been growing more severe. About a year after first attack the pain would extend at times to the jaw and tongue. Attacks recur now about every hour and vary in severity. During the attacks the affected side of face feels hot and looks red. Tongue thickly coated. Pulse good, regular. Radials slightly stiffened. Sensation on the right side of face less than on the left. The skin over the region supplied by the supra-orbital branch is extremely sensitive; infra-orbital not so. There is a scar over angle of jaw which he says is the scar of an operation performed by Dr. Tiffany, of this city, 3 years ago, and following which he had relief for 4 months. The inferior dental nerve was probably resected. There is an area of anæsthesia on the right side of the chin over the region of the mental foramen.

As his trouble was of so long standing and the attacks so frequent and aggravated, and the trouble appeared to be confined almost exclusively to the first branch, the radical operation seemed to be indicated. It was accordingly proposed and promptly accepted. The operation was performed on September 7, 1893, in the manner above described, and precisely the same difficulties encountered. They were dealt with in much the same way. In this case I am sure the greater portion if not all of the ganglion was removed, piecemeal. The wound was treated in the same manner as in Case I. For the first few days there was severe and obstinate vomiting, which finally yielded, and except this, there has been no unfavorable symptom. He has had not the slightest pain since the operation. The wound, as you see, has healed, leaving a very slight scar.

Case III.—J. P. S., male, aged 69. Was seen first in the Nervous Department of the Johns Hopkins Hospital Dispensary by Dr. Thomas, and referred to me for operation. He gave the following history: He has always enjoyed very good health. His present trouble began soon after an attack of the grip, about 3 years ago. While eating one day he was seized with a severe pain in the right side of the root of the tongue, which did not last very long, but which returned frequently. After 3 or 4 months the attacks began to increase in intensity and frequency, until rarely a day passed without pain. All teeth were extracted, without relief. For the last 3 months has been unable to do any work. Seems sometimes to be out of his mind with pain. Has of late been taking morphia in large quantities. The lightest touch almost anywhere over right side of the head causes a paroxysm of pain, always referred to the root of the tongue. Most sensitive points seem to be lips and chin. The pain is so severe that the patient is anxious to submit to anything that offers any hope of relief. Has very stiff arteries and mitral systolic murmur.

On account of the very aggravated nature of the trouble and its situation, it was thought best to do the radical operation at once. Its danger was explained to the patient, but he insisted upon having it done, as he had rather be dead than live as he was. It was accordingly performed September 15, 1893. The same method was employed as in the two preceding cases, except in the following important particulars. No attempt was made to ligate the middle meningeal artery, but it was divided and the foramen spinosum plugged with Dr. Halsted's gut-wool, which saved a good deal of valuable time. Having found from my preceding cases that it was wellnigh impossible to expose the ganglion by following back the second and third branches of the nerve, as is recommended, on account of the toughness of the fibers of the dura covering it, and the relaxed condition of the parts, owing to the pressure upon the brain substance from the retractors, I therefore followed along the edge of the petrous portion of the temporal bone forward, until the point was reached where the dura splits and is reflected over the ganglion. Having divided this edge of dura, the portion covering and binding the ganglion down can be easily raised with the periosteum elevator, and the ganglion exposed in its entirety. The second and third divisions were then cut off close to their foramina, the ganglion grasped with an artery clamp, and the entire root, motor and sensory, torn out from its attachment to the pons. The wound was treated in just the same way as described in the other cases. At the end of the operation, which lasted about an hour and and a half, the patient seemed to be in excellent condition, although rather pale. He was slow in coming out of ether and at times breathed stertorously. Six hours after operation pulse and respiration good; had recovered from the ether sufficiently to answer questions. An hour later suddenly became cyanosed, pulse and respiration ceased, and he died.

The autopsy, made by Dr. Councilman, showed, in brief, some laceration of the right temporal lobe of the brain, with slight amount of subdural hæmorrhage. All the arteries of the brain were dilated and in a high degree atheromatous. The aorta somewhat dilated, and contained numerous elevated sclerosed patches with slight calcification. The heart was large, and left ventricle somewhat hypertrophied and dilated. In the interior, along the septum, numerous globular thrombi; extensive patches of fibrous myocarditis in the apex, the anterior wall and septum of left ventricle. Both coronary arteries, particularly the left, thickened and contracted, some of the smaller branches entirely obliterated. The kidneys showed a slight degree of chronic nephritis.

From the autopsy report it is readily seen there was ample cause for death found in the pre-existing heart lesions, so the death can hardly be fairly laid to the operation *per se*, although undoubtedly precipitated by it. The operation of removal of the Gasserian ganglion is not an especially difficult one, if the points emphasized in the last case are borne in mind, and the ganglion can be fully exposed and removed entire, together with the motor and sensory root, from its brain attachment. It is at best, however, tiresome to the

operator, and necessarily attended by some shock to the patient, on account of the considerable pressure exerted upon the brain by the retractors.

Remarks of Dr. Thomas.

Dr. Thomas had been very much interested in examining the cases which had recovered from the operation. The patient who died he had examined in the dispensary and had referred him to Dr. Finney for the operation. This patient was suffering from intense pain referred to the right side of the root of the tongue. The pain had lasted for three years, had resisted all sorts of medication, and was so intense that his mind seemed at times to be unhinged. When first seen he was taking increasing doses of morphia and was anxious to have anything done that would relieve him.

The pain being referred to the root of the tongue indicated that the lingual branch of the inferior maxillary nerve was chiefly involved, and as this branch is given off shortly after the nerve leaves the foramen ovale, and runs throughout its course among the deeper tissues, the operation to divide the nerve would be a very extensive one and nearly, if not quite, as dangerous as the more radical and surer one of removing the Gasserian ganglion. We thought it better to advise the latter procedure.

The condition of patients after removal of the Gasserian ganglion is of great interest to the physician. The operation is a new one, and the reports so far have been for the most part of the operation itself, and very little has been said in regard to its effects except in relation to the relief of the pain. In Krause's case, however, in the Deut. Med. Wochenschrift,[1] in which he removed the whole ganglion with its root, a careful report is given of the after-condition with a chart of the anæsthesia.

The especial points of interest are in regard to the anæsthesia, the sense of taste, the condition of the muscles of mastication, and the trophic condition. In Dr. Finney's two cases, where the second and third roots together with portions of the ganglion were removed, the anæsthesia on the face was less than was expected, and was, of course, on the side operated on and confined to the area of distribution of the second and third branches. It was complete on the cheek below the eye, and rapidly became less towards the ear and on the temples. The side of the nose was not involved except at the lower part. The lips and chin were involved, but there was very little change over the greater part of the skin covering the lower jaw. The mucous membrane of the nostril, the lips, cheek, palate and tongue were anæsthetic. The areas of anæsthesia on the face differed somewhat in the two cases, but agreed in the essential points. Those parts of the skin where the terminal branches of the two divided nerves meet and intermingle with branches of healthy nerves were very little affected. Analogous conditions have been carefully studied in connection with the anæsthesias due to injuries of the nerves of the arm.

The relation which the trigeminal nerve bears to the sense of taste is a much disputed question. The view usually accepted is that the lingual nerve supplies taste-fibers to the anterior two-thirds of the tongue, that these fibers leave the lingual by the chorda tympani and run in it to the facial nerve, go with the facial to the geniculate ganglion, leave it there by its superficial petrosal nerve, enter Meckel's ganglion, and from it join the second branch of the fifth nerve, and so to the Gasserian ganglion. The glossopharyngeal is thought to supply taste-fibers to the back of the tongue. This view has depended largely for its support upon the study of cases of disease of the trigeminal and of the facial nerves in man; these cases are rarely unequivocal. But now that surgeons are cutting the branches of the trigeminal inside the skull, a study of these cases should demonstrate the part which this nerve plays in the sense of taste. The sense of taste was carefully tested in Dr. Finney's two cases, but unfortunately the results were contradictory. The man has lost completely the sense of taste on the anterior two-thirds of the right side of his tongue. He tastes perfectly on the left side of his tongue and on the back of the right side. In the case of the woman we were unable to demonstrate any loss of the sense of taste on the operated side. This goes to prove that when the second and third branches of the trigeminal are cut there is not always a disturbance of the sense of taste. In Krause's case referred to above, where the whole ganglion was removed, the sense of taste on the operated side was dull, but not completely lost.

The temporal and masseter muscles on the operated side, were in both Dr. Finney's cases affected; they were atrophied, and in the woman seemed not to act at all. A slight action of the masseter was noticed in the man. Paralysis of the other muscles of mastication could not be demonstrated. In the woman the masseter of the right side could not be made to respond to a strong Faradic current; the muscle on the left side acted well. A strong galvanic current caused a just perceptible contraction of the right masseter. In the man, the right masseter could be made to contract to a very strong Faradic current, whereas that on the left side responded well to a current of moderate strength. No paralysis of the muscles of the soft palate could be detected in either case. In neither case was there any trophic disturbance.

In both cases there was a paralysis of the frontalis and the corrugator supercilii; these muscles showed reaction of degeneration. This paralysis is caused by cutting, during the incision of the skin, of the branches of the facial nerve which supply these muscles.

[1] April 13, 1893.

ANNOUNCEMENT.

Special Courses for Practitioners and Special Students.

Pathology.—A course in Pathological Histology is given by Prof. Welch and Dr. Flexner at the Pathological Laboratory on Mondays, Wednesdays and Fridays at 2.30 P. M.

Bacteriology.—A course in Bacteriology is given by Dr. Bolton at the Bacteriological Laboratory on Tuesdays and Thursdays at 2.30 P. M.

Normal Histology.—A course in Normal Histology is given by Dr. Barker at the Anatomical Laboratory on Mondays, Wednesdays and Fridays at 2.30 P. M.

DEMENTIA PARALYTICA IN THE NEGRO.

ABSTRACT PAPER.

By Henry J. Berkley, M. D.

[*Read at the Annual Meeting of the Medical and Chirurgical Faculty of Maryland, April* 26, 1893.]

The increase in the number of negro insane during the years that have elapsed since the days of slavery, and in especial during the past 5 to 10 years, has elicited a good deal of attention among alienists throughout the country, especially in the South, where the negroes form a more prominent portion of the population than in the Northern and Western States.

This increase in insanity among the black races is doubtless almost entirely due to their altered social relations, the stress for existence, which did not exist under the conditions of former slavery, and their more active competition with the white man, not only from an educational standpoint, but also in the various occupations for an every-day livelihood. It may be objected that the negro takes life more easily than the white man, that he is less ambitious, and that the mental strain in the strife for existence is not so severe upon him as upon the whites; but even if he is less ambitious, he is also subjected to more constant debauchery, venery, and a most perfect want of all sanitary knowledge, and also at times to a lack of sufficient food, owing to his improvident character; conditions which affect only a comparatively small class of white men, and render the negro particularly liable to attacks of degenerative forms of mental disease.

The report of the Lunacy Commission for the State of Maryland for the year 1892 gives a total of 278 negroes in institutions scattered throughout the State; 130 males and 148 females. The census[1] for the same year gave a total negro population of 215,897, or 105,886 black males and 110,011 black females. The proportion therefore of colored insane to the entire colored population would be about 1 to 814 males, and 1 to about 747 females, or about 1 to 776 for the entire colored population, which is considerably less numerically than the proportion of white insane to the entire white population, which stands somewhere in a ratio of about 1 to 525, though this high proportion is greatly augmented by the relatively very large numbers of insane among our foreign classes, particularly among the Germanic races.

It is not fair to judge of the increase of insanity among the negroes by the records of a single asylum, particularly one like the Baltimore City institution, which harbors within its walls patients from every clime, from the Sandwich Islands to Russia, and from the State of Mississippi to the boundaries of Wisconsin; but our negro population is accustomed to less migratory habits than the white, and a large majority of the negro insane within the boundaries of the institution have their birthplace within the State of Maryland. At the close of the year 1884, the first annual report of the Baltimore asylum gave 9 black male and 17 black female inmates, a total of 26. The report of the year just closed shows that on December 31st there were 29 colored males and 52 colored females, total 71, an increase of over three hundred per cent in eight years, which, if it were the universal case, would be a most alarming subject for the people at large, as well as the medical profession to consider. Unfortunately we have not at our command sufficient statistical material to be able to determine if this large increase is the same in every asylum receiving colored patients, but insanity is vastly more frequent than formerly among the colored races as a unit.

During the past few years I have seen nearly every form of insanity that is presented in the white races reproduced in the black; all forms of mania and melancholia are common, epileptic insanity is frequent, paranoia is by no means uncommon, circular insanity somewhat rare, and so through the entire list of the forms of mental derangement. Our special subject—general paralysis—is by no means very uncommon. In the past forty months we have seen some eight cases of the disease, six within the asylum walls and two in the city, besides one or two more that eventually might have proved to be the same disease, but were not under observation sufficiently long to be diagnosed with certainty. As is usual with the lower classes, it is extremely difficult to obtain accurate histories of previous conditions before being seen as a patient in the asylum or elsewhere, and in three cases we have no histories at all, and the remainder are in some way imperfect.

Dr. Roberts,[1] of the Eastern North Carolina Insane Asylum, writing in 1883 on insanity in the negro, states that he has never seen a case of general paralysis. Dr. Kiernan,[2] of the Cook County Insane Asylum, Illinois, two years later, in a short paper on the same subject, mentions several cases, and seems to regard it as a not uncommon disease. Dr. Worcester, of the State Insane Asylum at Little Rock, Arkansas, writes me that he has had several cases, and also that when he was at the Michigan Asylum at Kalamazoo he had under his care a negro paretic dement, the descendant of parents who had come directly from Africa; a most important point in considering the disease from a socio-etiological standpoint. Dr. Blackburn, of the Government Asylum at Washington, gives short accounts of the autopsies and microscopic examinations made on five cases of dementia paralytica in negro women between the years 1889 and 1892.

Between the dates July 30, 1890, and August 13, 1892, there were admitted to the City Insane Asylum five undoubted cases of paretic dementia, all of whom came eventually to the autopsy table, and in two of them a most careful microscopic examination was made of the tissues of the brain and spinal cord.

Considering that in an average number of white patients during the same time of about 280 we have had but three

[1] Sun Almanac, 1893.

[1] Roberts: Nor. Car. Med. Jour., Nov., 1883.

[2] Kiernan: Jour. of Ment. and Nerv. Dis., 1885.

subjects with undoubted general paralysis (alcoholic cases not being included in this estimate), the showing for the negroes is certainly remarkable. The number of negroes, males and females, that were admitted in these two years was 74, accordingly the number of paretics would average 2½ per annum, and would give a percentage of nearly 7 (6.67) of all admissions as paretic dements, a most remarkable showing except for the qualifying fact that all insane negroes that are picked up by the police on the streets of the city are sent to this asylum, and besides the other institutions of the State do not offer the same showing, the affection being almost unknown among them.

Symptomatology.—Our material has not afforded us many data of the symptoms of the first stage of general paresis in the negro. The case C. H. came the nearest to the first stage that we have witnessed, and the very few other early histories that we have obtained have only mentioned a gradual change from the ordinary habits of the patients.

In every case the mental aberration has been early and profound; the grandiose delusions have lasted—compared to some cases among the whites—a very short period, and are succeeded by a stage of the most profound dementia, which continues until death ensues from some intercurrent trouble; the sufferer, ofttimes within a few months, being reduced to a state in which he is even incapable of feeding himself, paying not the slightest attention to the calls of nature, sitting day after day in a state of semi-sleep, and when aroused by a hand-shake, only uttering a few disconnected, incoherent words.

Pupillary changes are early and almost always present, and usually take the form of a myotic alteration of the pupil, sometimes with irregularities in the contour.

Motor symptoms in the form of a fine fibrillary tremor are always present, especially located in the tongue, labial muscles, and somewhat less frequently in the smaller muscles of the hands and feet.

Disturbances of speech occurred also in all cases, divided nearly equally between various degrees of syllable-elision and stuttering speech. In the later stages the difficulty in articulation is increased to an enormous extent, and in some of the patients not a single utterance could be understood.

The majority of our negro patients have been educated only sufficiently to read a few lines and write their own names. Accordingly it has been impossible to ascertain with them the finer indications of the change in the handwriting. Usually, a straight line drawn with a pen gave indication of the presence of fibrillary tremor, by its waves and irregularities.

Nearly all the patients showed some change in the gait, usually simple awkwardness and uncertainty, and in one or two a more characteristic ataxic gait was present. In the later stages the motions were slow and heavy, the feet wide apart, and still later, a total inability to take more than a few steps without assistance.

Paralyses of the ocular muscles have been entirely wanting, but when the disease had advanced to any extent their action was slow and to some extent irregular, from the general weakness in common with the other muscles of the body. Optic atrophy has not been met with.

Apoplectiform and epileptiform crises have been present in every case except one (Thompson), and manifested their usual indications, and were quite often followed by passing pareses of the limbs, and not uncommonly accompanied by ecchymoses of the conjunctivæ.

Anæsthesias and paræsthesias are apparently rare, but one definite case of well-defined cutaneous disturbance being found among the number, but it is to be added, that except in a single case all were so greatly demented when first seen that slight anæsthesias could readily have been passed by unnoticed.

Spinal symptoms were in no case very prominent; the most frequent were exaltation of the deep reflexes, with but little implication of the superficial ones. One case had complete loss of the knee-jerk when admitted, and in one other it was sub-normal. In both, this symptom passed away, and in common with the others there was exaltation of the deep reflexes when the disease had far advanced.

For purposes of *classification* we have been able to distinguish three groups: (1) The most common type, in which delusions of grandeur or expansive delirium were present; (2) that in which excitement and depression alternated, the patient being one day possessed of vast personal wealth, and the next plunged into a very abyss of despair; and (3) that in which the mental powers became gradually enfeebled, and the patient remained childish (in our longest case for over two years) until cut off by an intercurrent malady.

To *recapitulate*, the most characteristic symptom for the disease in the negro has been the extreme rapidity of the mental enfeeblement, in which he permanently remains, while the other characteristics continue until death ensues.

Etiology.—Our material is not sufficient to afford any clearer ideas on this point than have been furnished by the white races. We do not think that syphilis plays a very prominent part, the affection being absent in a very large percentage of our cases; nor do we think that alcohol is necessarily a direct factor in the causation, but rather would we lay much greater stress on the altered condition of the race, from its life of comparative want of daily care for self, of not so many years ago, to the present struggle for individual existence. The asylum records from the North, and especially from the West and Northwestern States, show a very greatly increased ratio of cases of general paralysis over those of the Southern and Middle States, and it is particularly in the first-named localities where the negro comes into sharp competition with the white man, and to those localities the mentally better developed negroes are drifting, the more indolent and less mentally active ones remaining in their native States.

A somewhat remarkable circumstance is to be noticed in the histories of the patients appended, namely, that all have arterio-sclerosis, usually in a highly marked degree. But arterio-sclerosis in the negro is, perhaps owing to their manner of life, a very every-day occurrence, and this extreme frequency renders it difficult to lay any particular stress upon it.

Pathology.—The nervous systems of the two subjects that we have microscopically examined, and the results obtained by Dr. Blackburn, have shown very similar changes. There has been always a widely pervading cell degeneration of a

granular, probably fatty, type, presenting some variations in extent and appearance in each case. Besides the cellular changes there has been some overgrowth of the connective tissue structures within the cerebral substance, and a very diffuse inflammatory change around the sheaths of the blood-vessels, with slighter alterations in the sheaths themselves. In the case of High the autopsy took place probably within fifteen months from the commencement of the disorder, and arterial changes were the most prominent pathological feature that were shown by the microscopic examination.

To me, as demonstrated by these two autopsies, as well as by others from the brains of white persons, it is more than probable that the beginning of the disease is to be found in some alteration of the blood-supply, followed by a peri-arterial lymphoid growth, disturbance of the lymph-currents, consequent mal-nutrition of the nerve structures, degenerative changes, and then, when the nerve elements begin to atrophy and disorganize, there is an overgrowth of the spider cells, with other fixed cell proliferation among the degenerating tissues; then come the serous and sanguineous apoplexies and the other incidentals that are occasionally found. Accordingly we cannot accept either of the common views of the pathological state of dementia paralytica: the first, that it is due to a diffuse interstitial cortical encephalitis, in which the connective tissue elements are primarily affected, nor (2) that it is a diffuse parenchymatous inflammation, which commences in the nerve elements proper, and involves secondarily the neuroglia structures.

Abstract of Case.

J. C., æt. 40, negro laborer, was admitted to Asylum, Feb., 1891. The patient was brought to the institution by a police officer, without immediate history.

Family History.—Both parents are living at an advanced age. C. is married and has several children.

Past History.—Until lately C. has been employed as a day laborer; previously he served in the United States army and navy. Has used alcohol in moderation, and denies syphilis. Has had sufficient education to enable him to read, and write a few lines.

Actual Examination.—C. is well built, of medium height, very dark, and without a trace of white blood in his veins. The cranium is not markedly asymmetric, and is brachycephalic. Hearing and eyesight fair, gustation normal. The ocular muscles act normally; the pupils react neither to light, accommodation, nor to irritation of the neck region. The ears are slightly malformed.

The facial expression is dull, there is well-marked atonicity about the facial muscles, causing a drooping appearance, and, to a degree, flattening of the naso-labial fold. There is a well-marked fibrillary tremor about the facial muscles, and an even more marked one in those of the tongue and lips. Syllable-elision is a prominent symptom. There is no sensory aphasia, all ordinary objects being named correctly, except that thermometer is called "weather."

The muscular strength in proportion to the development is slight, though nutrition is fair. Muscular tonus is poor, muscular sense fairly well preserved. There is fine tremor about the muscles of the hands, less markedly in those of the feet.

The gait is stiff, the legs held widely apart, there is much heel and toe motion. All the deep reflexes are considerably exaggerated, there is slight ankle clonus, the skin reflexes are above par.

Tactile sensations about the hands and feet are dulled in slight degree, impressions are not accurately localized, touches on a finger or toe being frequently referred to another than the one irritated. Slight differences in heat and cold are not recognized, and the skin may be pricked quite deeply with a needle before a pain-sensation is elicited.

With closed eyes the patient stands quite well. There is considerable fumbling in an attempt at buttoning the coat or other effort to execute any of the finer movements. There are no trophic disturbances. Circulation, vegetative, and urinary functions are normal. There are no marks of syphilis. The temperature is a little above the normal.

Delusions of grandeur, unsystematized, are extremely prominent, being especially those of wealth and personal importance. He owns Fort McHenry and all the forts and guns in the world, is a policeman, a United States senator, etc., while all the surroundings are golden, he is possessed of hundreds of thousands of boots and shoes, and all the houses in Baltimore belong to him.

When contradicted in any of his assertions he becomes suddenly very angry and attempts to strike the person contradicting, but in a moment is appeased and is calmly talking of his great importance. When asked how he came by so much wealth and power he says he was given them by the "government," but utterly fails to reason by what merit he should have received them.

From February 1891 to March 1892 the change in the *personnel* was slow and progressive, speech became more and more involved, urinary troubles set in, and the dementia became greater and greater, though at no period during this time were the delusions of aggrandizement lost.

During March he had two apoplectiform attacks, the second being preceded by excitement and the appearance of a conjunctival hemorrhage. After the seizures he is helpless and stupid and has to be fed, dressed, and put to bed.

From this time the downfall was rapid, apoplectiform seizures occurred at intervals of two or three weeks, some followed by marked temporary paresis, especially noticeable about the face.

By the end of June our patient had become completely demented and perfectly helpless, sitting in his rolling chair day after day, grinding his teeth and taking no notice of anything, even on the most pronounced stimulation. Death occurred September 5th, after a series of epileptiform convulsions.

Summary of the Autopsy.

Tuberculosis of the left lung, thickening of the pericardium, endarteritis of the larger arteries, nutmeg liver, slight alterations in the kidneys, tubercular ulcers in the small and large intestines.

The head measured 57 cm. in circumference. The weight of the entire brain with the soft membranes is 1119 grammes. The skull is thin for a negro, the frontal bone measuring 4 mm. There are no marked cranial deformities. The dura is adherent over the vertex and base to the pia. The basilar and middle cerebral arteries are diffusely thickened.

The entire brain is somewhat atrophied, but especially in the anterior half of the frontal region. In some places the pia peels off more readily from the cortex than is usual, while in others it is sufficiently adherent to drag off bits of the cerebral substance with it. On section of the cerebral substance there is considerable leathery resistance to the knife, and the cortex is more whitish than gray. There is also slight yellowish discoloration of the lenticular ganglia, more apparent on the left than on the right side. The lining membrane of the lateral ventricles is slightly opaque, and the ventricles contain about 25 cc. of clear fluid. The ependyma of the 4th ventricle is distinctly thickened and of a grayish color, while the veins are prominent.

The cerebellum, medulla spinalis, and cauda equina are macroscopically normal.

Microscopic Examination.

Two different alterations are found in the pia: (1) the membrane is completely separated from the outer lamina of the brain substance by a layer of finely fibrillated albuminoid matter, in places of very considerable thickness, but there is slight alteration of the

membrane itself, and small proliferations of the connective tissue fibers and round nuclei; (2) there is an extensive thickening of all the layers of the pia, great swelling and overgrowth of the connective tissue bundles, and extensive proliferation of the round and oval nuclei in the meshes of the connective tissue fibres. This part of the pia has thoroughly united with the outer lamina of the cortex, and has destroyed, where it is most intense, all traces of the normal structures along the outer portion of the layer. The sheaths of the vessels proceeding inwards and outwards from the cerebral substance carry large numbers of the round nuclei, which press far inward into the cerebral tissues. Transition forms between the two varieties of alteration occur in places.

Within the cerebral substance the vascular lesions form the most prominent feature; there is an increase in the apparent number of the smaller vessels, and even among the smallest arterioles a nuclear increase is at once apparent around their sheaths. As we ascend the scale in point of size this augmentation of the nuclei becomes more and more marked, irregular rows from three to six deep fill up the entire peri-vascular space, and in some instances encroach (by pressure) upon the lumen of the artery, making its inner contour slightly irregular. The changes in the vascular wall seem to be confined almost strictly to the adventitia, though occasionally a little thickening of the muscularis may be made out. Arteries in both the white and gray matter have the same changes. The veins show the same condition, though to a lessened extent. The peri-vascular and cellular lymph-sheaths show a universal thickening.

An increase in the number of the neuroglia cells is to be seen everywhere in both white and gray substances. In the first layer this is most clearly seen, the thickly interlacing branches with prominent offshoots to the vascular walls, or extending into the deeper layers, forming a very striking picture.

Cellular degenerations are found in every region. The most frequent is a coarse granular alteration; the protoplasmic arms have disappeared or lost their sharp definition, the cell body is filled by fine, and extremely coarse particles, each distinct, and everywhere present in the cellular protoplasm, and in some places the degeneration has advanced so far that almost every appearance of a nerve cell has disappeared.

The smaller pyramidal cells of the 3d and 4th layers have suffered more in proportion than the larger pyramidal cells. Glia cells with their tentacles attached to the cell walls are very prominent, and are apparently attacking and removing the dying nerve cells.

The second type of cell degeneration is less frequently met with. A certain number of the pyramidal cells are glassy and transparent, the nucleus is large in proportion to the cell's size, and is perfectly globular, the edges ill defined, and the nucleolus either indistinct or invisible.

Next to the cellular degeneration the absence of a large number of the medullated fibres from the several layers of the cortex is the most salient feature among the nerve elements. Where the ingrowth of the pia has destroyed the outer layer the tangential band is naturally absent, but where this does not occur they have equally disappeared. Those that are present are varicose, in places only to be traced by a row of myeline droplets, and no axis cylinder is to be perceived. Not only is the tangential band diminished in breadth and number, but far fewer medullated tubes are to be seen turning into it from the deeper layers, and also in the 2-3-4 layers the intercellular network has the same characteristics as the tangential band, namely, the fibres are sparse and very varicose and broken. The radial fibres have a nearly normal appearance.

In the thalami and lenticular ganglia the alterations among the nerve and neuroglia elements are approximately the same as in the cortex and need not be again described.

The region of the medulla has the same vascular changes as in the cerebrum, only lessened in degree, and the changes among the nerve cells are less pronounced. In the median raphe, at a point just back of the center of the organ, an oblong split is seen, surrounded on all sides by well-preserved cubical epithelium. The lumen is patent, and the whole appearance is that of an ordinary central canal. There is no connection with the epithelium of the ventricle, and the supernumerary canal is perfectly unconnected with any other cavity. The limit of its length is from the striæ acousticæ to the point of the calamus scriptorius; above and below it disappears.

The alterations in the spinal cord correspond to those of the medulla oblongata, namely, slight thickening of the pia, thickening of the arterial walls, increase in the number of nuclei around arteries, and extensive pigment-deposits in the large motor cells of the anterior horns. The white columns show no signs of degenerative alterations.

PROCEEDINGS OF SOCIETIES.

THE JOHNS HOPKINS HOSPITAL MEDICAL SOCIETY.

Meeting of April 3, 1893.

Exhibition of Surgical Cases. Tuberculous Knee-joint, Goitre, Old Dislocation of Elbow.—Dr. Halsted.

Our first case is that of a tuberculous knee-joint which we exsected. The patient is a woman of 40 years of age, and her trouble commenced a year and a half ago. When she was admitted to the hospital she was suffering very greatly and wished to have the knee operated upon. The disease was quite advanced, the entire capsule being involved. There were no foci of disease in the bone, so that we could in this instance do an operation which we do in all cases of ankylosis from any other cause than tuberculosis. Instead of excising a wedge-shaped piece as is ordinarily done, and shortening the leg a good deal, we simply take off the head of the tibia and make in it a concavity.

In this way we do away with the necessity of sutures; the bones fit accurately into each other, and there is no tendency to lateral displacement. There is a tendency to flex backwards, but it is easy to apply extension in such a way that stitches are practically superfluous. The operation was done nineteen days ago. Of course it is too early for ankylosis, but it is quite firm already. This is the first time we have looked at the wound since the operation. The result is very good.

My next case is one of goitre in a girl 18 years of age. Her goitre began when she was 7 years old. We excised it seventeen days ago. It was a multilocular cystic goitre, not very large, perhaps a little larger than a large orange, but it pressed on the trachea so as to interfere with breathing and swallowing. It was of interest because it was with difficulty that we could find enough good thyroid tissue to preserve. You know that we cannot remove with safety the entire thyroid gland. The piece that we left was at about the junction of the isthmus and the left lobe, in size about as large as a half-dollar. The wound has healed very nicely without a bad symptom, and as you see the scar is very slight. When she wears a dress even without a collar, nothing will be seen unless she goes low-necked.

The third case is the most interesting one that we have had for some time. This little boy dislocated his elbow about four months ago. It was a dislocation of both bones of the forearm backwards. He could not flex his arm at all. Pronation and supination were

very limited in extent. The bones were in the usual position, the forearm bent at an angle of 45 degrees with the straight line of the arm. Up to this time no one has succeeded in reducing an old dislocation of the elbow-joint without exsection of bones and usually a typical exsection. Recently F. Bessel-Hagen, of Heidelberg, has published all the cases he could collect, eleven in number, and in all of them there was more or less typical exsection of the bones made. This is the fourth case that I have operated upon. Heretofore I have always exsected the bones. It occurred to me that after all we could probably reduce these old dislocations if we could only overcome the shortening of the triceps muscle which ensues after the dislocation. The idea suggested itself to me from several cases of fracture of the patella which we have had, where we have brought down the patella sometimes three or four inches. In this case we cut right through the olecranon where the two processes join. We happened to strike it just right. We then removed the new tissue which had filled up the space formerly occupied by the articular surface of the ulna, that is, the lower articular surface of the humerus, which was covered with new connective tissue. We excised that, and then dissected the triceps tendon well up on the arm, and by transverse cuts on its under surface we were able to draw it down as far as necessary in order to make it meet the ulna which had already been replaced. This is the first case of the kind on record. We have one to do to-morrow which I hope will result successfully. It is now nearly four weeks since this has been done. Although it pains the boy to move it, you see he can rotate it considerably, and there is already quite a little flexion. We shall certainly be able to flex it more than a right angle, and if we can extend it, as I am sure we can in time, that will be an excellent result.

Meeting of May 15, 1893.

Diffuse Infiltrating Carcinoma of the Stomach.—Dr. Welch.

Dr. F. R. Smith: Dr. Welch has requested me to give a brief history of the case from which the specimen came. The man came into the hospital in the beginning of April, but had been under observation in the dispensary some time before, complaining of indigestion, with flatulence and pyrosis, which had lasted for six months. He absolutely denied that he had ever vomited; then he corrected himself and said that he did not vomit but spat up a good deal of bitter stuff. On asking him if he ever vomited in large quantities he said no.

The family history of the patient is negative except that the family fear that his sister may have a similar trouble, for which reason they have allowed the autopsy. His personal history is entirely negative. He has no long history of indigestion. Up to four or five months before coming into the hospital he had been a thoroughly healthy man, a very moderate drinker, and had no venereal disease and had lived a very regular life.

His occupation, that of a tailor, had been a sedentary one. The symptoms that he complained of were slight pain in the epigastric region and loss of appetite. When the stomach was empty he complained more of an uncomfortable feeling than of pain. The pain was very rarely sharp. He went into St. Joseph's Hospital in December and was treated, he said, for indigestion. While there he caught cold and had a swollen gland under the left clavicle. When he came into the dispensary the epigastric region was examined and nothing whatever was found. Dr. Finney was asked to look at this gland in the left axilla, and after examining it and hearing the man's symptoms, he made the diagnosis of carcinoma of the stomach. He was seen by Dr. Osler about a fortnight afterwards. Dr. Osler said he felt something indefinite in the epigastric region, but he would not positively say anything about its size except that it was probably a very small lump. The man came to the dispensary from January to April. All his symptoms grew worse, and he developed swollen glands under the other clavicle, and then, after a few weeks, there was a distinct lump or ridge in the epigastric region. This got bigger and the patient became more and more distressed. He came into the hospital April 4th. The ridge was then very distinct and was found to occupy the right hypochondrium and extended as low down as the umbilicus. The stomach tube was inserted and brought up some blood. It distressed the patient so very much that it was not tried again. Two attempts were made to dilate his stomach with bicarbonate of soda and tartaric acid. He had hardly swallowed the tartaric acid when he vomited, and therefore the outlining of the stomach was always somewhat unsatisfactory. This ridge-like mass extended, when the stomach was distended as well as could be, slightly below the umbilicus. It was said in the note to feel something like a rolled-up omentum. The resonance of the tumor suggested that it might be connected with a cavity. Dr. Finney's diagnosis was confirmed by Dr. Osler. Although suffering some pain, the patient was fairly comfortable, but he gradually got worse. The patient lost weight very rapidly and the tumor increased in size. The only other thing of interest in the case was that one morning he complained of great pain in the left leg, which was swollen and very painful to the touch and which made him take to his bed. The inguinal glands on that side seemed to be enlarged, but no thrombosis of the vein could be felt. The leg got better, but he gradually sank, and at his own desire he went home. The same night he was taken very ill and died in the morning.

Dr. Welch: This case was diagnosed during life as one of carcinoma of the stomach. If it were only that, perhaps it would not be worth while to exhibit it here, but it is a form of carcinoma of the stomach not very common, although you will find it described in the literature. The interest of the case is due also to the fact that the disease can be readily confounded with fibrosis or cirrhosis of the stomach, so that the literature of the subject of cirrhosis of the stomach is of very little value so far as cases are reported as fibrosis of the stomach, induration of the pylorus, etc., without microscopical examination. In other words, a large proportion of the older cases to be found in the literature reported as cirrhosis of the stomach are in reality this disease, viz., diffuse cancer of the stomach. At the autopsy the parts around the stomach were the seat of marked fibroid induration. The transverse colon, the mesentery, the duodenum and the pancreas were all more or less matted together. I exhibit here the entire stomach. You will observe that the size and the shape of the organ are about the size and shape of the kidney. The cavity of the stomach is reduced to an extremely small capacity. The walls are enormously thickened; the mucous membrane is everywhere intact; no ulceration and no nodular growth. It is entirely a diffuse disease involving all of the coats and all of the parts of the stomach. The thickening is universal, but is somewhat greater towards the pylorus than at the fundus. Examining more carefully, we find that certain coats of the stomach are very much thickened. The grayish, more translucent, muscular coat is extremely hypertrophied and makes up one-third to one-half of the entire thickness of the walls of the stomach. The peritoneum is smooth and glistening and distinctly thickened, but not extremely so. The submucous coat of the stomach is enormously thickened, is extremely dense and fibrous in character, and looks as though it were the primary seat of the disease. The mucous membrane is a very thin line, and is distinctly atrophied. The firm consistence and unyielding character of the walls of the stomach cause it to remain open on incision. There is nothing at all suggestive of a tumor; there is no circumscribed or projecting or lobulated new growth. Cirrhosis of the stomach consists in a fibrous overgrowth in the walls without cancerous involvement. This condition, which cannot be distinguished by the naked eye from cirrhosis, is really cancerous, as determined by the microscope. The microscope shows the following condition of things: The mucous membrane is an extremely thin membrane indeed. The tubules can be made out, but they are very much altered in

Before Operation.

After third Operation.

MULTIPLE HERNIÆ.

size and broken up in general arrangement. You can make out rows of cells suggesting a tubular arrangement, and that is about all. The muscularis mucosæ is extremely hypertrophied and is everywhere provided with nests of cancer cells running down in strands connecting the mucous membrane with the submucosa. The submucous coat is the seat of large cancerous alveoli. The cancer cells are to be found in all of the coats of the stomach. They are present in the mucous membrane, where they have a tendency to conform more or less to the tubular arrangement of the mucous membrane, but they are different from the cells which belong normally to the tubules of the stomach. Many of them are very large, irregular cells, with large, deeply-staining vesicular nuclei. Similar clumps of cells extend in bands and alveoli through the muscularis mucosæ, and form the largest masses in the submucosa. The alveoli containing cancer cells extend into the muscular coats along the septa and between individual fibers. There is no coat of the stomach which has escaped. This is the type of infiltrating cancer as distinct from the one which grows in the form of a circumscribed tumor. Here the infiltration is uniform throughout the walls of the stomach. This type of cancer is found also in the ovary, which is then like a very large ovary, the regular outlines being preserved. There is such a thing also as infiltrating cancer and sarcoma of the serous membranes, which spread out flat like a pancake and do not form tumor masses. I have seen one in the meninges of the brain which was simply a uniform thickening, preserving accurately the normal appearances of the dura mater so far as shape was concerned. We have no positive information as to which coat of the stomach is primarily involved in this case. The general idea is that the growth originates in the mucosa. One would almost be tempted to think that there was a uniform involvement of the tubules and that everywhere they tended to grow down through the muscularis mucosæ and into the submucosa. I have alluded to this form of carcinoma in the article in Pepper's System of Medicine on Cancer of the Stomach, and called attention to the danger of confounding it with cirrhosis of the stomach. The growth in this instance was primary in the stomach. The only secondary nodules present are in the neighboring lymphatic glands.

I was particularly interested in this case, because some years ago I made an autopsy on a somewhat similar one, also a case of diffuse infiltrating carcinoma of the walls of the stomach, but it was secondary. The woman, about 40 years of age, had double carcinoma of the ovary, of that form in which we have this exaggeration of the normal shape. There was marked ascites in that case, and the fluid was withdrawn during life. From the character of the fluid I ventured a diagnosis of carcinoma involving the peritoneum. No operation was done in the case. There was no suspicion during life that the stomach was involved. We found in the stomach a uniform enlargement of all the walls without ulceration of the mucous membrane, and with extreme narrowing of the lumen of the stomach. I have placed under the microscope a section of this stomach for your inspection. The peritoneal coat is thickened, the muscular coat considerably hypertrophied, and the submucous coat shows interlacing bands of fibrous tissue. The mucous membrane in this case, instead of being atrophied, is hypertrophied. There is a marked lengthening of the gastric tubules and a marked hypertrophy of the muscularis mucosæ in this case. It looks like a diffused fibroid induration of the organ, and would correspond to descriptions of fibroid induration of the stomach or cirrhosis of the stomach. It, however, contains nests of cancer cells. In this case the involvement was from the peritoneum and secondary. The type of the cancer was that of the carcinoma of the ovary. We have three diseases which can produce gross alterations in the stomach, indistinguishable from each other to the naked eye: cirrhosis or fibroid thickening of the stomach, primary infiltrating carcinoma of the stomach, and secondary infiltrating carcinoma of the stomach.

Meeting of October 9, 1893.

Dr. H. A. Kelly was elected President for the year, and Dr. Hunter Robb, Secretary.

Subcutaneous Traumatic Emphysema.—Dr. Finney.

The first case to which I will ask your attention to-night is one of interest both on account of the nature and extent of the lesion. It is a case of subcutaneous traumatic emphysema involving the whole trunk, the arms, the neck and face, the thighs, the upper half of the legs. It followed a bullet wound of the neck. The neck, penis and scrotum were enormously swollen. The swelling has subsided very rapidly during the past few days. The history of the case is as follows: Man, aged 32. Was shot by an unknown person, September 26, 1893, the bullet entering the right side of the neck a little below and anterior to the angle of the jaws, and passing directly through. There was considerable hæmorrhage at the time from both mouth and nose. Very shortly after the shooting, the right side of the neck began to swell. Swelling extended down over chest, then to the left side of neck, and then gradually over the whole body, except scalp, nates and lower half of legs. It has been attended by little pain, and some tenderness on pressure. He had slight dyspnœa from the swelling of the neck, which, when he entered the hospital a week ago, was extreme. The swelling, as you can see from the wrinkled condition of the skin, has subsided a great deal. The wound was dressed antiseptically. Only the expectant treatment was employed for the emphysema, with the result as you see.

Multiple Herniæ.

The second case I have to show is one of multiple hernia in a child 21 months old; double inguinal and umbilical, all congenital. The inguinal herniæ were of immensely large size, as will be seen by the photograph which I will pass around for your inspection. The operations were done in three sittings. The inguinals were operated upon after Dr. Halsted's method, and the umbilical by simply suturing off the sac, and then stitching together the fascia and edges of the recti muscles with buried silk mattress sutures. He has made an uninterruptedly good recovery after each operation, except that there was following both inguinal operations a slight epididymitis, which soon subsided. You will see the healing has been perfect throughout.

Three Cases of Resection of Gasserian Ganglion. Dr. Finney. See page 91.

Uretero-Ureteral Anastomosis—Uretero-Ureterostomy.—Dr. Kelly. See page 89.

J. M. Charcot: Memorial Notice.—Dr. Osler. See Bulletin for September, page 87.

HOSPITAL HISTORICAL CLUB.

Rare Book.

At a recent meeting of the Historical Club, Dr. Kelly exhibited the following book and accompanying note upon it by Dr. J. S. Billings of Washington:

Champier (Symphorien).—Index librorum in hoc volumine contentorum. Domini Symphoriani Champerii physici Lugdunensis libelli duo. Primus de medicinæ claris scriptoribus in quinque partibus tractatus. Secundus de legum divinarum conditoribus: una eum impugnatione sectæ Machomericæ: quam Arabes alchoranum vocant. Opus tum proptes hystoriarum cognitionem tum proptes rei novitatem perutile. 6 pl. 52 ff.

Dyalogus domini Symphoriani Champerii: et Sebastiani Coppini Mollissoniensis in legem Machometican. 24 ff. Ejusdem

domini Symphoriani de corporum animorumque morbis eorundemque remediis opusculum in duos partitum libellos.

Primus introductivus est in practicam Galeni. Secundus ægritudinum animorum curativus. 24 ff.

Evangelicæ Christianæque religionis ex scriptis Gentilium et poetarum et philosophorum validissimis argumentis comprobatio.

8 ff. Ejusdem domini Symphoriani aphorismi sive collectiones medicinales. Alexandri Benedicti Veronensis aphorismi sive collectiones. 27 ff.

Alexandri Aphrodisei Greci de febribus. Opera parva Hippocratis noviter de Greco in Latinum traducta libri septem. Epistolæ quædam ad ipsum dominum Symphorianum Champerium. Sm. 4° [Lyon, 1506?].

This book was probably printed by Jannot de Campis at Lyons in 1506. The date is fixed by the last paragraph of the letter of Gondisalmus (or Gonsalvo), Toledo, to the author and compiler, Symphorien Champier, thanking him for the dedication of his book, found on folio xli of the first part.

On the next page is a woodcut representing the beheading of St. Symphorien, with Champier and his wife on their knees in the foreground. This design is given in a number of Champier's books, having been adopted by him as a sort of heraldic device, and it should appear on a blank leaf at the end of the book, but this leaf is wanting in this copy, which seems to be otherwise complete. It is a rare book, as are all of the early Lyons imprints of the smaller works of Champier. There is a copy in the Library of the British Museum and another in the Bibliothèque Nationale of Paris.

Symphorien Champier was born about the end of the year 1491; studied at Paris, Montpellier and Pavia; became physician of the Duke of Lorraine, and was knighted by him on the field of battle of Marignan. He died about 1537 or 1538. He wrote many works in medicine, theology, history and poetry, but none of them had any lasting repute or value. This book is a curious mixture of essays on biography, theology and medicine, as will be seen from the list of its contents.

THE NURSES' JOURNAL CLUB.

Annual Report for the Year 1892-93.

The report of the Journal Club now submitted covers a period very nearly equal to that of the school year, being from October 24th, 1892, to May 22d, 1893, during which time meetings have been held without interruption on the second and fourth Mondays of each month.

Coincident with the growth of the Training School there has been apparent a corresponding growth and development of the Journal Club, and the year has been marked by an increase in the number of original papers, an advancement in the care and discrimination shown in the selection of articles to be read, and by the greater interest and earnestness displayed in the discussions.

From time to time during the year there has been correspondence with other schools, who have solicited information as to the workings of the Journal Club, and with various periodicals in regard to the publication of the original articles.

Of the articles from many sources which have been read before the club, five have been original papers, written by members, as follows: "District Nursing," by Miss James; "Some Possibilities for Nurses," by Miss A. McDonald; "Loyalty among Nurses," by Miss Hamilton; "Diseases of Children," by Miss A. McDonald; "One View of Nursing," by Miss A. Carr.

An interesting account was also given by Miss Macrae of her work in connection with the Women's Dispensary of South Baltimore.

The following is a detailed report of the work done at each meeting during the year:

The first meeting, October 24th, was opened by a brief address from the retiring President, Miss Nutting. Miss Dock was elected President for the ensuing year. Some letters from other schools were read by Miss Hampton, and two articles, "The Hampton Colored Nurses" and "The Georgia Infirmary," by Miss Higbee.

November 28.—"The First Capital Operation under Ether"; "District Nursing," by Miss James; "An Effort toward Social Democracy," by Jane Addams.

December 12.—"The Inhalation of Dust in Pulmonary Diseases," by Dr. Wm. B. Canfield; "The Fruits of Vivisection," by Sir Andrew Clark; "The Cold Bath Treatment," by Dr. Osler.

January 9.—"Some Possibilities for Nurses," by Miss McDonald; "Convalescence," by Charles Lamb; Correspondence from *The Hospital Magazine*, London.

January 23.—"A Memorial on Mrs. Wardroper," by Florence Nightingale; Extracts from the First Annual Reports of Bellevue and other Hospitals; "Burial or Cremation," from *The Hospital;* "Loyalty among Nurses," by Miss Hamilton

February 13.—"The Diary of a Nervous Invalid"; "The Use of Drainage Past and Present," by Dr. Robb; "Nursing at the World's Fair," by Mrs. Fenwick.

February 27.—"Extra-uterine Pregnancy," by Dr. Henry C. Coe; "Sanitation in Relation to the Poor," by Dr. Wm. H. Welch; "Insomnia and Recent Hypnotics," by Dr. Hammond.

March 13.—"Hygiene for Nurses," by Miss Manning; "Diseases of Children," by Miss A. McDonald; "Dispensary Work," by Miss Macrae.

March 27.—"Hydrotherapy in the Treatment of Nervous and Mental Disease"; "History of Nursing," from *The Hospital;* "Kaiserswerth."

April 10.—"Hospitals of the World," from *The Hospital;* "Physical Culture," by Miss Manning; "The Proper Duration of the Lying-in Period," by H. Seymour Houghton; "One View of Nursing," by Miss Carr.

April 27.—"Diet in Disease," by Mrs. Ernest Hart; "Vaccination against Asiatic Cholera"; "The Treatment of Asiatic Cholera," by John K. Patterson.

May 8.—"An Address on Surgery," by Dr. Hingston; "How to Nurse the Dying"; "Nursing the Insane," by J. S. Brooks.

May 22.—Sketches of Kate Marsden's work among Lepers; Nursing Systems of the Hospitals of the World; Extracts from Burdette's book on Hospitals.

The report of the Secretary closed the work for the year.

THE JOHNS HOPKINS HOSPITAL REPORTS.

Volume I. This volume is now in press. It will contain the studies from the Pathological Laboratory. The volume will be provided with illustrations. It will be edited by Dr. W. H. Welch, Professor of Pathology and Pathologist to the Hospital.

Volume II. The second volume of the Hospital Reports began in January 1890. This volume is now completed. It contains 570 pages and 28 plates and figures. It will be furnished, bound in cloth, for $5.00.

Volume III. This volume is now in progress. Subscription $5.00. Price of Part 1, 2, 3 (Report in Pathology), now ready, $2.00.

The Johns Hopkins Hospital Bulletins are issued monthly. They are printed by THE FRIEDENWALD CO., Baltimore, from whom single copies may be obtained; they may also be procured from Messrs. CUSHING & CO. and the BALTIMORE NEWS COMPANY. Subscriptions, $1.00 a year, may be addressed to THE JOHNS HOPKINS PRESS, BALTIMORE; single copies will be sent by mail for fifteen cents each.